

Best Practices for Infection Prevention and Control of

Resistant *Staphylococcus aureus* and Enterococci

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CHICA-Canada/BD MRSA Road Show
2009



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Objectives

- Review the high points of the document
 - Discuss some of the controversies
 - Simplify and Focus the message
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Provincial Infectious
Diseases Advisory
Committee
(PIDAC)

Best Practices For Infection Prevention and Control of Resistant *Staphylococcus aureus* and Enterococci

- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Vancomycin-intermediate *Staphylococcus aureus* (VISA)
- Vancomycin-resistant *Staphylococcus aureus* (VRSA)
- Vancomycin-resistant Enterococcus (VRE)

In All Health Care Settings

Ministry of Health and Long-Term Care
Published – March 2007

What are We Looking At?

- ❑ Methicillin-resistant *Staphylococcus aureus* (MRSA),
 - ❑ Vancomycin-intermediate *Staphylococcus aureus* (VISA),
 - ❑ Vancomycin-resistant *Staphylococcus aureus* (VRSA)
 - ❑ Vancomycin-resistant enterococci (VRE)
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Where?

- Continuum of care
 - Acute care
 - Long-term care
 - Chronic (including mental health) care
 - Home health care
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Why?

- Decrease the risk of acquisition and transmission of MRSA and VRE to clients/patients/residents and health care providers
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Why?

- Assist staff in managing clients/patients / residents colonized or infected with MRSA and VRE within health care settings and as they move from one health care setting to another
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Why?

- Assist the health care system in assessing and containing new antibiotic resistant organisms.
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Sections (Chapters)

1. Programs for the prevention and control of MRSA and VRE
 2. Screening for MRSA and VRE
 3. Prevention and Control Measures
 4. Education
 5. Antibiotic Stewardship
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Sections

6. Program evaluation

7. Management of VISA and VRSA

Assumptions and Principles

- Best Practices to prevent and control the spread of infectious diseases, including Health Canada's "*Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care*"
 - Health care settings devote adequate resources to infection prevention and control
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Assumptions and Principles

- Hand Hygiene Programs
 - Adequate resources to Environmental Services/Housekeeping
 - written procedures for cleaning and disinfection of client/patient/resident rooms and equipment
 - education of new cleaning staff and continuing education of all cleaning staff
 - ongoing review of procedures
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Assumptions and Principles

- Health care settings provide a setting that is conducive to following and maintaining Routine Practices . This includes the set up and organization of the health care setting in order to provide access to hand hygiene
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Assumptions and Principles

- Regular education and support to help staff consistently implement appropriate infection prevention and control practices
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Education to Cover:

- ❑ the risks associated with infectious diseases and the importance of proper and prudent use of antibiotics;
 - ❑ hand hygiene
 - ❑ principles and components of Routine Practices
-

Education to Cover:

- assessment of the risk of infection transmission and the appropriate use of personal protective equipment (PPE),
 - appropriate cleaning and/or disinfection
 - individual staff responsibility
 - collaboration between professionals in OHS and IC
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Assumptions and Principles

- Go on for another 10 points!
 - Collaboration
 - OH&S Act
 - Communicable Diseases
 - Public Health
 - Resources
 - Health advisories (all levels)
 - Feedback/Effectiveness
-



Definitions

- **Direct Care:** Providing hands-on care, such as bathing, washing, turning client/patient/resident, changing clothes/diapers, dressing changes, care of open wounds/lesions or toileting.
 - Feeding and pushing a wheelchair are not classified as direct care.
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Health Care Setting

- Any location where health care is provided, including
 - Emergency care
 - hospitals
 - long-term care homes
 - mental health facilities
 - outpatient clinics
 - community health centres and clinics
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Health Care Setting

- Physician offices
 - Dental offices
 - Offices of allied health professionals
 - Home health care.
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Risk Factors for Acquisition of MRSA

- Invasive procedures
 - Prior treatment with antibiotics
 - Prolonged hospital stay
 - Stay in an intensive care or burn unit
 - Surgical wound infection
 - Close proximity to a colonized patient
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Risk Factors for Acquisition of VRE

- Severity of underlying illness
 - Presence of invasive devices
 - Prior colonization with VRE
 - Antibiotic use
 - Length of hospital stay.
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VRE and the Environment

- Most items in the health care environment including
 - blood pressure cuffs
 - electronic thermometers
 - monitoring devices
 - stethoscopes
 - call bells
 - bed rails
 - More likely when patient has diarrhea
-

Incidence MRSA

- Canadian hospitals – 2005: 11.2% of *S. aureus* isolates are MRSA
 - 55% of patients whose site of acquisition was known:
 - 72% had hospital-acquired MRSA,
 - 15% had acquired MRSA in a nursing home
 - 13% were thought to have acquired MRSA in the community.
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Incidence VRE

- VRE represents 2.2% of enterococcal isolates in Canada
 - 90% in acute care
 - 2% in nursing homes
 - 8% in community
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1. Programs for the Prevention and Control of MRSA and VRE

- Prevention and control program
 - All patients should receive care
 - Healthcare facilities must recognize that isolation is not good
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2. Screening for MRSA and VRE

- previously colonized or infected with MRSA or VRE
 - spent time in a health care facility outside of Canada in the last 12 months
 - those who have been admitted to, or who have spent more than 12 continuous hours as a client / patient / resident in any health care facility in the past 12 months
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2. Screening for MRSA and VRE

- those transferred between health care facilities
 - Clients / patients / residents who have recently been exposed to a unit/area of a health care facility with an MRSA or VRE outbreak
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2. Screening for MRSA and VRE

- other high-risk client / patient / resident populations as identified by the IPCP, Public Health or the Regional Infection Control Network.
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Additional for MRSA

- those receiving home health care services in the past year;
 - those receiving treatment with an indwelling medical device
 - those receiving care in intensive care units, transplant units, burn units
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Additional for MRSA

- those living in a communal setting (e.g. shelter, halfway home, correctional facility)
 - those with a history of injection drug use
 - those who are household contacts of people with MRSA
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Additional for MRSA

- ❑ those who are immunocompromised
 - ❑ individuals from populations where community-associated MRSA is known to be a problem (e.g. organized sports teams)
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Additional for VRE

- Those who have been recently exposed to second- and third-generation cephalosporins
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Screening

- Repeat isolated (single site) positive
 - Determine source of new positives
 - Notify all affected healthcare facilities
 - Contacts should have at least one screening specimen
 - Point prevalence screens
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Specimens

- a swab from the anterior nares; AND
- a swab from the perianal area*; AND
- a swab from skin lesions, wounds, incisions, ulcers and exit sites of indwelling devices, if present, using aseptic technique where indicated
- For newborn infants, a swab from the umbilicus should also be taken

*perineal or groin swab is acceptable

Prevention and Control Measures

Hand Hygiene

- Staff and patients
- Alcohol vs. soap and water

Additional Precautions

- Isolation during screening of high risk
 - Private room prioritizing, and cohorting suggestions
-

Prevention and Control Measures

PPE

Acute Care

- Gloves and gowns to enter room

Non-acute Care

- Gloves and gowns for direct patient care

Environment and Equipment

Dedicate, clean, disinfect adequately

Prevention and Control Measures

Patient Transfer

- Inter-facility, intra-facility
 - Status should not interfere with transfer
 - PPE for transfer
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Patient Mobility

- the patient understands and is able to comply with precautions
 - all drainage is contained
 - the patient does not have a productive cough (applicable to MRSA)
 - the patient is continent of stool and urine or contained by diaper/indwelling catheter
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Patient Mobility

- the patient is able to follow basic hygiene practices such as cleaning hands
 - the patient is not on an outbreak unit
 - the patient has no other disease requiring precautions (e.g. airborne infections)
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Prevention and Control Measures

Staff Considerations

- Screening only in outbreaks if outbreak will not go away
- Decolonization suggestions

Visitors

- PPE based on direct patient care
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Prevention and Control Measures

Decolonization

- Not currently recommended

Duration of Precautions

- Language on clearing patients and re-screening

Information Management

- Flagging
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Prevention and Control Measures

Role of the Laboratory

Outbreak Management

□ See Table 1

4. Education

- Samples of pamphlets, information sheets in document for staff, patients and families
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5. Antibiotic Stewardship

- Need regular review of antibiotic use in facility
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6. Program Evaluation

- Audits
 - Feedback
 - Action Plan for issues needing improvement
-

7. VISA and VRSA

- Information on these organisms
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Conclusion

- ❑ This 88 page document offers framework
 - ❑ Tends to be a bit acute care-centric
 - ❑ Modifications to come with new RPAP document
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Questions?



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